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EXAMINER

PATEL, DHAIRYA A

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/993,865	Applicant(s) CULLEN ET AL.	
	Examiner Dhairya A. Patel	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communication filed on 11/18/2005. Claims 1-31 are presented for examination.
2. This amendment has been fully considered and entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3,7-12,16-17,20-25,28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chandrasekaran et al. U.S. Patent # 6,397,352 (hereinafter Chandrasekaran)

As per claim 1, Chandrasekaran teaches a method of handling messages received at a messaging system server, the method comprising:

-storing, in non-persistent storage, messages received from at least one client;
(Fig. 2A element 204) (column 6 lines 61-67) (column 7 lines 1-2).

The reference teaches the message is stored in the propagation queue (non-persistent storage).

-removing delivered messages from the non-persistent storage (Fig. 3 element 308) (column 10 lines 50-51) and;

The reference teaches the message is removed from the propagation queue (non-persistent storage)

-saving to persistent storage (Fig. 2 element 2A), after a delay interval has elapsed, content of at least one of the messages stored in the non-persistent storage(column 9 lines 11-14)(Column 7 lines 28-57)(Fig. 3).

The reference clearly teaches that the message is in the propagation queue which is non-persistent storage (volatile) because once the message is sent to the destination which there is a certain delay, the propagation process then receives message data (content of the message) to store in durable or non-volatile memory (persistent storage) at the source site and by maintaining the propagated message data in a nonvolatile memory (column 7 lines 30-39) a recovery mechanism is provided that allows the source site to determine whether the message has been sent to the destination site.

As per claim 2, Chandrasekaran teaches the method of claim 1, wherein the storing, removing, and saving occur concurrently. (Fig 3 element 302-322)

As per claim 3, Chandrasekaran teaches the method of claim 1, wherein storing in the non-persistent storage comprises storing in a log queue. (Fig. 2A element 204) (Column 6 lines 61-67) (Column 7 lines 1-2).

As per claim 7, Chandrasekaran teaches the method of claim 1, further comprising determining the delay interval. (Column 8 lines 20-39)

As per claim 8, Chandrasekaran teaches the method of claim 7, wherein determining the delay interval comprises: determining at least one metric based on messages handled by the server; and determining the delay interval based on the at least one metric (column 8 lines 20-39). The reference teaches adding a priority attribute to determine when the messages are sent to the destination site. Therefore each message is going to be given a number, which is basically like keeping a count of number of messages handled by the server. Therefore since the server is going to give priority value to each message and also associated with the message is the UID, which is identifying the message, the server knows how many messages are handled by the server by which it will find out when these messages in the queue will be delivered to the destination site.

As per claim 9, Chandrasekaran teaches the method of claim 8, wherein the metric comprises a metric based on a number of sending clients using the server to deliver messages. (Column 8 lines 20-47). The reference teaches the propagation queue having a UID, and priority value (Fig. 2A) assigned to each message. Therefore since there is UID for each message, which is like keeping count of the messages, so in order to send a message a client has to be present therefore since the numbers of

messages are known which is equal to number of sending clients using the server to deliver the messages.

As per claim 10, Chandrasekaran teaches the method of claim 7, wherein determining the delay interval comprises dynamically determining the delay. (Column 8 lines 20-47)

As per claim 11, Chandrasekaran teaches the method of claim 1, wherein the received messages are received over a communications network. (Fig. 13 element 728,722,726,720)

As per claim 12, Chandrasekaran teaches the method of claim 1, wherein the messages comprise guaranteed messages; (column 7 lines 39-57) and wherein the messaging system comprises a message-oriented middleware system. (Column 7 lines 27-38)

The reference teaches sends the commit messages (guaranteed messages) to the destination site to indicate the transaction (transferring) should be committed. The reference also teaches that messages are maintained in the non-volatile memory at the source site until they are transferred to the destination site. Therefore in case of the source site failure, destination site will fetch the message from the non-volatile memory from the source site.

As per claim 16, Chandrasekaran teaches a computer program product, disposed on a computer readable medium, for handling messages received at a server, the computer program including instructions for causing a server processor to:

-store, in a non-persistent storage (Fig. 2A element 204), messages received from at least one client as the messages are received; (column 6 lines 61-67) (column 7 lines 1-2)

The reference teaches the message is stored in the propagation queue (non-persistent storage).

-remove messages from the non-persistent storage as the messages are delivered; and (Fig. 3 element 308) (column 10 lines 50-51) and;

The reference teaches the message is removed from the propagation queue (non-persistent storage)

-save to persistent storage (Fig. 2A element 212), after a delay period has elapsed, content of at least one of the messages stored in the non-persistent storage(column 9 lines 11-14)(Column 7 lines 28-57) (Fig. 3)

The reference clearly teaches that the message data (content of the message) are stored in the durable or non-volatile memory (persistent storage) and by maintaining the propagated message data in a nonvolatile memory (column 7 lines 30-39), a recovery mechanism is provided that allows the source site to determine whether the message has been sent to the destination site.

As per claim 17, Chandrasekaran teaches a computer program of claim 16, wherein the instructions for causing the server processor to store messages in a non-persistent storage comprise instructions for causing the server processor to store the messages in a log queue (Fig. 2A element 204)(column 6 lines 61-67) (column 7 lines 1-2).

As per claim 20, Chandrasekaran teaches the computer program of claim 16, further comprising instructions for causing the server processor to determine the delay. (Column 8 lines 20-39)

As per claim 21, Chandrasekaran teaches the computer program of claim 20, wherein the instructions for causing the server processor to determine the delay comprise instructions for causing the server processor to: determine at least one metric based on the received messages; and determine the delay based on the at least one metric (column 8 lines 20-39). The reference teaches adding a priority attribute to determine when the messages are sent to the destination site. Therefore each message is going to be given a number, which is basically like keeping a count of number of messages received. Therefore it is inherent since the server is going to give priority value to each messages and also associated with the message is the UID, which is identifying the message, the server knows how many messages are received by the server by which it will find out when these messages in the queue will be delivered to the destination site.

As per claim 22, Chandrasekaran teaches the computer program of claim 21, wherein the metric comprises a metric based on a number of clients using the server to deliver messages. (Column 8 lines 20-47). The reference teaches the propagation queue having a UID, and priority value (Fig. 2A) assigned to each message. Therefore since there is UID for each message, which is like keeping count of the messages, so it is inherent that in order to send a message a client has to be present therefore since the

number of messages are known which is equal to number of sending clients using the server to deliver the messages.

As per claim 23, Chandrasekaran teaches the computer program of claim 16, wherein the instructions for causing the processor to determine the delay comprise instructions for causing the processor to dynamically determining the delay. (Column 8 lines 20-47)

As per claim 24-25,28-31, they teach same limitations as claims 1-17,20-23 respectively, therefore rejected under same basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6,13-15,18-19,26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandrasekaran in view of Stein et al. U.S. Patent 6,289,212 (hereinafter Stein).

As per claim 4, Chandrasekaran teaches the method of claim 1, but fails to teach further comprising transmitting an acknowledgement message to a client that sent a received message, the acknowledgement message indicating that the received message will not be lost by the server in the case of server failure. Stein teaches transmitting an acknowledgement message to a client that sent a received message, the acknowledgement message indicating that the received message will not be lost by

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the server in the case of server failure. (Column 12 lines 21-37). It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting an acknowledgement message. The motivation for transmitting the acknowledgement message is to let the user know that the message has been sent and be delivered.

As per claim 5, Chandrasekaran fails to teach the method of claim 4, wherein transmitting an acknowledgment message to the client comprises transmitting the acknowledgment message to the client for a delivered message. Stein teaches the method of claim 4, wherein transmitting an acknowledgment message to the client comprises transmitting the acknowledgment message to the client for a delivered message. (Column 12 lines 21-37) It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting an acknowledgement message. The motivation for transmitting the acknowledgement message is to let the user know that the message has been sent and be delivered.

As per claim 6, Chandrasekaran fails to teach the method of claim 4, wherein transmitting an acknowledgment message to the client comprises transmitting the acknowledgment message to the client for the received message's storage in persistent storage. Stein teaches the method of claim 4, wherein transmitting an acknowledgment message to the client comprises transmitting the acknowledgment message to the client for the received message's storage in persistent storage. (Column 12 lines 21-37). The reference teaches that message is sent and the facsimile message is placed in the

asynchronous request queue. It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting the acknowledgement message for the received message's storage in persistent storage. The motivation for doing so would have been so that the client knows that message is going to be delivered properly.

As per claim 13, Chandrasekaran teaches a method of handling guaranteed messages received at a message-orient middleware server over a network, the method comprising: storing, in a log queue in non-persistent storage guaranteed messages received from at least one client as the guaranteed messages are received (Fig. 2A element 204) (Column 6 lines 61-67) (Column 7 lines 1-2)(column 7 lines 28-57); removing guaranteed messages from the non-persistent storage as the guaranteed messages are delivered (Fig. 3 element 308) (column 10 lines 50-51); dynamically determining a delay time period(Column 8 lines 20-47); storing to persistent storage, after the determined delay period has elapsed, content of at least one of the guaranteed messages stored in the non-persistent storage (column 9 lines 11-14)(Column 7 lines 28-52) (Fig. 3) .

The reference clearly teaches that the guaranteed message is in the propagation queue (log queue) which is non-persistent storage (volatile) because once the guaranteed message is sent to the destination which there is a certain delay, the propagation process then stores the message data in durable or non-volatile memory (persistent storage) at the source site and by maintaining the propagated message data in a nonvolatile memory (column 7 lines 30-39) (emphasis added), a recovery

mechanism is provided that allows the source site to determine whether the message has been sent to the destination site.

Chandrasekaran fails to teach transmitting a guarantee acknowledgement message to a client that sent a received message, the message indicating that the message will not be lost by the server. Stein teaches transmitting a guarantee acknowledgement message to a client that sent a received message, the message indicating that the message will not be lost by the server (column 12 lines 21-37). The reference teaches that the facsimile message has been sent is a guaranteed message indicating the message is not going to be lost because if the other side would not receive the fax, the message has been sent would not be displayed.

It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting an acknowledgement message. The motivation for transmitting the acknowledgement message is to let the user know that the message has been sent and be delivered.

As per claim 14, Chandrasekaran & Stein teaches the method of claim 13, but Chandrasekaran fails to teach transmitting the guarantee acknowledgement message comprises transmitting the guarantee acknowledgement message for a delivered guaranteed message if the guaranteed message is not persistently stored, the guarantee acknowledgement message otherwise being sent when the message is persistently stored. Stein teaches transmitting the guarantee acknowledgement message comprises transmitting the guarantee acknowledgement message for a

delivered guaranteed message if the guaranteed message is not persistently stored, the guarantee acknowledgement message otherwise being sent when the message is persistently stored. (Column 12 lines 21-37). It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with acknowledgement message when the message is persistently stored. The motivation for doing so would have to let the user know that the message has been received by source site and will be delivered properly.

As per claim 15, Chandrasekaran teaches the method of claim 13, wherein dynamically determining the delay time period comprises: determining a metric based on messages handled by the server; and determining the delay time period based on the determined metric. (Column 8 lines 20-39). The reference teaches adding a priority attribute to determine when the messages are sent to the destination site. Therefore each message is going to be given a number, which is basically like keeping a count of number of messages handled by the server. Therefore it is inherent since the server is going to give priority value to each messages and also associated with the message is the UID, which is identifying the message, the server knows how many messages are handled by the server by which it will find out when these messages in the queue will be delivered to the destination site.

As per claim 18, Chandrasekaran teaches the computer program of claim 16, but fails to teach further comprising instructions for causing the server processor to transmit an acknowledgement message to a client that sent a received message, the message indicating that the message will not be lost by the server. Stein teaches instructions for

causing the server processor to transmit an acknowledgement message to a client that sent a received message, the message indicating that the message will not be lost by the server. (Column 12 lines 21-37). It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting an acknowledgement message. The motivation for transmitting the acknowledgement message is to let the user know that the message has been sent and be delivered.

As per claim 19, Chandrasekaran fails to teach the computer program of claim 18, wherein the computer program instructions for causing the server processor to transmit an acknowledgment message to the client comprise instructions for causing the server processor to transmit the acknowledgment message to the client for a message saved from non-persistent storage to persistent storage. Stein teaches the computer program of claim 18, wherein the computer program instructions for causing the server processor to transmit an acknowledgment message to the client comprise instructions for causing the server processor to transmit the acknowledgment message to the client for a message saved from non-persistent storage to persistent storage. (Column 12 lines 21-37). The reference teaches that message is sent and the facsimile message is placed in the asynchronous request queue. It would have obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chandrasekaran's invention in Stein's invention to come up with transmitting the acknowledgement message for messages saved to persistent storage. The motivation for doing so would have been so that the client knows that message is going to be delivered properly.

As per claim 26-27 they teach same limitations as claim 18,19 respectively.
Therefore rejected under same basis.

Remarks

5. As per remarks, Applicant stated:

As per claim 1,13,16,24, the applicant states Chandrasekaran does not disclose "saving to persistent storage, after a delay interval has elapsed, content of at least one of the messages stored in the non-persistent storage".

Examiner respectfully traverses applicant's remarks for the following reasons.

In column 7 lines 28-57 and column 9 lines 11-14 and Fig. 3, Chandrasekaran teaches message data is stored in volatile memory (non-persistent storage) (propagation queue) initially, because once the message is sent to the destination which there is a certain delay, the propagation process then receives message data (content of the message) (column 9 lines 11-14) to store in durable or non-volatile memory (persistent storage) at the source site and by maintaining the propagated message data in a nonvolatile memory (column 7 lines 30-39) a recovery mechanism is provided that allows the source site to determine whether the message has been sent to the destination site.

Applicant also states that "non-volatile memory stores a message's propagation sequence number, UID and propagation state, none of which include the message data". Examiner respectfully disagrees with the applicant because in the column 9 lines 11-14, it clearly states, "the **message data** is initially written into the propagation table (persistent storage)".

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A). "Message Transfer in communication network" by Black et al. U.S. Patent # 5,878,056.

B). "Reliable Event Delivery System" by Kailash et al. U.S. Patent # 5,951,648

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


8.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dhairya A. Patel whose telephone number is 571-272-5809. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAP


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER